

YERMOL'YEVA, Z.V.; VALEDINSKAYA, L.K.; LAZAREVA, Ye.N.; AVTSYN, A.P.; AZLETSKAYA,
A.Ye.; BEREZINA, Ye.K.; RAVICH, B.V.; RYKALEVA, A.M.; GUSLOVA, A.M.

Experimental study of protein-free preparations from the liver and the
thymus. Trudy AMN SSSR 22:14-21 '52. (MLRA 6:6)
(Antibiotics) (Tuberculosis)

CA

116

Stability of protein-lipoid complexes in myocardium in some acute infections in children. E. K. Berestina (Second Stalin State Med. Inst., Moscow). *Arkhh. Patol.* 11, No. 6, 33-7(1949).—The stability of protein-lipoid complexes in myocardium of essentially healthy

children, in contrast to adults in which decompn. occurs in 24 hrs., is unaffected by treatment of tissue specimens with 15% NH_4Cl even during 72 hrs. Toxic forms of scarlet fever and diphtheria lead to a severe loss of this stability; dysentery has a weaker effect. The appearance of fatty substances in the protoplasm of muscle fibers in artificial lipophanerosis induced by NH_4Cl is a result of decompn. of protein-lipoid complexes of sarcoplasm, i.e. myofibrillae.

G. M. Kozolapoff

BEREZINA, Ye. (Khar'kov)

Blood sausage and paté from whale meat. Mias.ind.SSSR 35 no.1:36
'64. (MIRA 17:4)

BEREZINA, Ye.

MATROZOVA, S., kandidat khimicheskikh nauk.; ZHURAVSKAYA, N., kandidat
khimicheskikh nauk.; BEREZINA, Ye., inzhener.; SHABANOVA, V.,
inzhener.

Iodometric method for determining bread content in meat balls.
Mias. ind. SSSR no.2:18-19 '57. (MLRA 10:5)
(Packing house products) (Iodometry)

ACCESSION NR: AT4002223

These formulas were tested on the Taman Peninsula and in the Shebalinskiy gas field. Results showed that this method may give more accurate density estimates than calculations based on empirical geological data. Orig. art. has: 2 figures, 1 table, and 5 formulas.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 26Dec63

ENCL: 00

SUB CODE: AS

NO REF SOV: 002

OTHER: 000

Card 4/4

ACCESSION NR: AT4002223

$$\sigma = 7,365 - \frac{g_1'' - 2g_2'' + g_3''}{0,0419 (2h_2 - h_3 - h_1)}$$

For parabollic gravity changes on the reference plane $g^0 = g_1^0 + a_1 x + a_2 x^2$,

$$\sigma = \frac{0,3086 (h_1 - 3h_2 + 3h_3 - h_1) +}{0,0419 (h_1 - 3h_2 + 3h_3 - h_1) +} \times$$

$$\times \frac{+ g_1'' - 3g_2'' + 3g_3'' - g_1''}{+ k (\Delta g_1^p - 3\Delta g_2^p + 3\Delta g_3^p - \Delta g_1^p)}$$

When there are no topographic corrections,

$$\sigma = 7,365 + \frac{g_1'' - 3g_2'' + 3g_3'' - g_1''}{0,0419 (h_1 - 3h_2 + 3h_3 - h_1)}$$

Card 3/4

ACCESSION NR: AT4002223

$$\begin{aligned}
 g_1'' &= g_1^o + k \sigma \Delta g_1^p; \\
 g_1'' &= g_1^o + a \Delta x + 0,0410 (h_2 - h_1) - \\
 &\quad - 0,3086 (h_2 - h_1) + k \sigma \Delta g_1^p; \\
 g_2'' &= g_1^o + 2a \Delta x + 0,0410 (h_2 - h_1) - \\
 &\quad - 0,3086 (h_2 - h_1) + k \sigma \Delta g_2^p,
 \end{aligned}$$

where g_1'' , g_2'' , g_3'' are gravity readings at given points, h_1, \dots, h_3 are absolute elevations at given points, $\Delta g_1^p, \dots, \Delta g_3^p$ are terrain corrections at given points, and k is the coefficient equal to the reciprocal of the assumed density value. Solving for σ ,

$$\sigma = \frac{0,3086 (2h_2 - h_3 - h_1) - g_1'' + 2g_2'' - g_3''}{0,0410 (2h_2 - h_3 - h_1) + k(-\Delta g_1^p + 2\Delta g_2^p - \Delta g_3^p)}.$$

When corrections for topography are small,

Card 2/4

ACCESSION NR: AT4002223

S/2702/63/000/013/0081/0086

AUTHOR: Berezkin, V. M.

TITLE: Experimental determination of the density of the intermediate layer from gravimetric data

SOURCE: USSR. Glavnoye upravleniye geologii i okhrany* nadr. Geofizicheskaya razvedka, no. 13, 1963, 81-86

TOPIC TAGS: gravimetry, density determination, density correction factor, density distribution, geophysical prospecting

ABSTRACT: A method based on the use of gravity data is proposed to replace densitometer determinations used to calculate the density of a stratum above a gravity datum plane. Formulas developed for this method are based on the principle of averaging gravity values by dividing the topographic profile above the datum plane into convenient segments and then obtaining the overall average result for the entire profile, introducing topographic corrections when necessary. For linear gravity changes on the reference plane $g^0 = g_1^0 + ax$, the formula is

Card 1/4

BEREZINA, V.M.

"The Cultivation of Birches in Nurseries in the Black Earth Zone
of Zavolozh'ye";

dissertation for the degree of Candidate of Agricultural Sciences
(awarded by the Timiryazev Agricultural Academy, 1962)

(Izvestiya Timiryazevskoy Sel'skokhozyaystvennoy Akademii, Moscow, No. 2,
1963, pp 232-236)

BEREZINA, V. M., Cand. Agri. Sci. (diss) "Growing of Birch in Nurseries of Chernozem Zone of Trans-Volga (Orenburg Oblast)," Moscow, 1961, 16 pp. (Moscow Agri.Acad.) 200 copies (KL Supp 12-61, 279).

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204800008-6

BEREZINA, V.M.

DECEASED
1961

1962/5

SEE ILC

ZOOLOGY

BEREZINA, V.A., inzh.

Development of the technology for printing top sliver with the
continuous method. Nauch.-issl.trudy TSNIIShersti no.18:122-131
'63. (MIRA 18:1)

BEREZINA, V.A., inzh.; YEGOROVA, L.G.

Single-bath method for dyeing semi-wool fabrics. Nauch.-issl.trudy
TSNNIShersti no.18:115-122 '63. (MIRA 18:1)

BEREZINA, V.I.; SHUBINA, T.N.

Combined method for the hydrolysis of ethyl silicates.
Lit. proizv. no.1:38 Ja '63. (MIRA 16:3)
(Ethyl silicates)
(Hydrolysis)

SIDNEVA, K.M., nauchnyy sotrudnik, kand.tekhn.nauk; BOYNO-RODZEVICH, V.P.,
nauchnyy sotrudnik, inzh.; SIMANOVSKAYA, Ye.L., nauchnyy sotrudnik,
inzh.; BEREZINA, V.A., starshiy nauchnyy sotrudnik

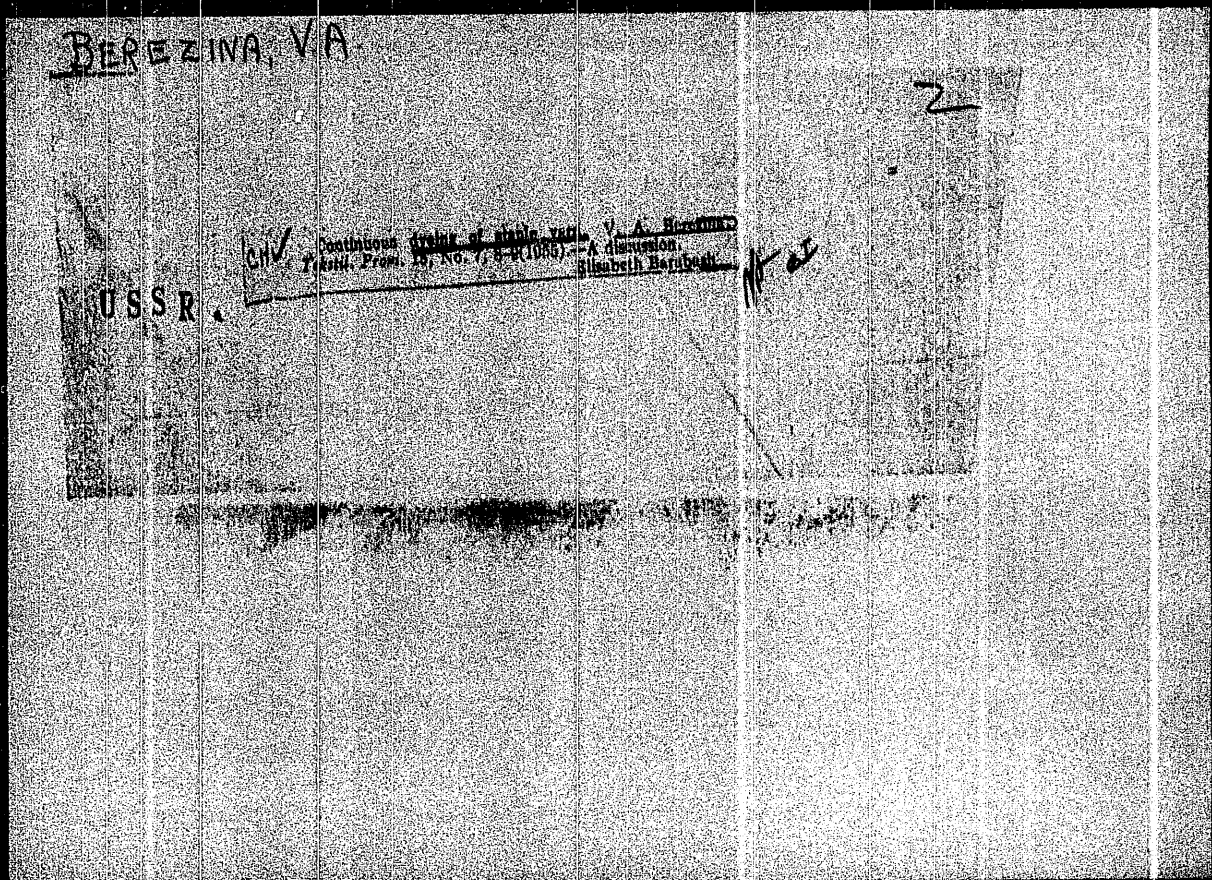
Wool dyeing with vat dyes in weakly-alkaline baths. Tekst.prom.
25 no.11:61-64 N '65. (MIRA 18:12)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov
i krasiteley (for Sidneva, Boyno-Rodzevich, Simanovskaya).
2. Tsentral'nyy nauchno-issledovatel'skiy institut sherstyanyoy
promyshlennosti (for Berezina).

BEREZINA, V.A., inzh.

Use of vat dyes for dyeing wool and viscose fibers. Nauch.-
issl.trudy TSNIIShersti no.16:110-130 '61.

Development of formulas and technology for the printing of wool
and semiwool scarfs and woolen ribbons. 130-146
(FILKA 16:11)



CA BEREZINA, V. A.

25

Dyeing of woolen fabrics with vat dyes. V. A. Berezina. *Tekstil. Prom.*, 1949, No. 9, 29-30. A procedure for vat dyeing in an acid medium is described. AcOH is added to the soln. of the leuco-base; the pptd. leuco-acid is held in suspension by a dispersing agent and applied to the fabric, which is then treated by alk. NaHSO₄. Optimum conditions for several vat dyes were detd. in lab. trials. B. A.

TEST AND THE ORDER		PROCESSES AND PROPERTIES INDEX		TEST AND THE ORDER	
Berezina V.H.		Ca		25	
<p>Increasing the fastness of wool fibers to the action of light and weather. A. M. Serchuyakov and V. A. Berezina. <i>Tekstil. Prom.</i> 8, No. 7, 49-51 (1948). Pure cashmere wool was dyed with a variety of dyes, and its properties were detd. initially and then after 2 months' exposure to sun and weather. Acid Green, Acid Violet, Safranine, and other dyes contg. quinquevalent N were found to be very poor. Azodyes, such as Acid Chrome Black and Acid Chrome Yellow, were much better. A soln. of tanning ext. contg. added CuSO_4 and K_2CrO_4 was found to be a good preservative, as was a soln. of CrF_3. M. S.</p>					
<p>AIIM-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>					

HEREZINA, T.V.

Recent developments in the chemical control of the ground beetle
zabrus tenebrioides. Zshch. rast. ot vred. i bol. 6 no.5:54
My '61. (MIRA 15:6)
(Rumania--Ground beetles)

L 20614-66

ACC NR: AP6009809

stresses and by full annealing of all welds. Orig. art. has: 6 figures and
2 tables.

0
[DV]

SUB CODE: 11, 13/ SUBM DATE: none/ ORIG REF: 007/ OTH REF: 002/ ATD PRESS:
4224

Card

2/2

BK

L 20614-66 EWT(m)/EWP(w)/EWP(v)/T/EWP(t)/EWP(k) JD/HM/HM

ACC NR, AP6009809

SOURCE CODE: UR/0096/66/000/004/0014/0017

AUTHOR: Ratner, A. V. (Candidate of technical sciences); Berazina, T. G. (Engineer)

ORG: VTI, Chelyabenergo (CHENERGO)

TITLE: Effect of the welding thermal cycle on the formation of cracks in the weld-adjacent zone during welding of austenitic steel pipelines

SOURCE: Teploenergetika, no. 4, 1966, 14-17

TOPIC TAGS: austenitic steel, steel pipeline, pipeline welding, pipeline weld, weld cracking

ABSTRACT: During the welding of austenitic steel pipelines sharp temperature gradients and rapid heating and cooling are observed in the weld-adjacent zone, 5-6 mm wide. In a part of this zone the temperature reaches 1300C, a temperature at which some segregated inclusions begin to melt. This phenomenon is the main cause of ring-shaped cracks observed in welds of austenitic-steel pipelines. Electroslag-melted austenitic steels have a uniform distribution of alloying elements and are less susceptible to segregation than conventionally melted steels. Therefore, welded pipelines made of electroslag-melted-steel pipes are more reliable than those made of conventionally melted steel pipes. The reliability of the latter pipelines can be improved by reducing the sharp temperature gradients and minimizing welding

Card 1/2

UDC: 621.643.411.4

BP'REZINI, I.G., inzh.

Scale formation on superheater pipes of boilers with increase
and supercritical steam parameters. Elek, sta 36 no.4 20-22
Ap '65. (MIR 1965,

BALASHOV, Yu.V., inzh.; NAKHLOV, V.A., inzh.; BEREZINA, T.G., inzh.

Steampipe damage resulting from drainage system defects. Flek. sta.
35 no.6:81-82 Je '64. (MIRA 18:1)

ACCESSION NR: AP4041174

SUBMITTED: 00

ATD PRESS: 3066

ENCL: 00

SUB CODE: MM,IE

NO REF SOV: 005

OTHER: 001

Card 3/3

ACCESSION NR: AP4041174

have a definite level of elastic deformations ($\epsilon = 1.5-2.5 \cdot 10^{-4}$). The deformations correspond to conditional stresses of 30—50 Mn/m² in the linearly stressed condition and are completely removed during subsequent operation. The control-type welded joints have a deformation level significantly lower than that of welds made directly on the steam pipeline. A sharp peak of tensile deformations (ϵ reaching $14.0 \cdot 10^{-4}$, or a conditional stress of up to 280 Mn/m²) was detected in the weld-affected zone at a distance of 2—6 mm from the fusion line. Compression deformations of the same magnitude predominate in the immediate vicinity of the fusion line. Operation of the steam pipeline at 565C for 12,000 hr reduced the peak stresses to 190 Mn/m², although they were completely eliminated at a distance of 10 mm from the weld. Hence, these residual stresses, combined with those originating in the steam pipeline during operation, can play a substantial part in local failures of austenitic steam pipelines. Orig. art. has: 4 figures, 2 tables, and 3 formulas.

ASSOCIATION: VTI; Chelyabenergo

Card 2/3

ACCESSION NR: AP4041174

S/0096/64/000/007/0060/0063

AUTHOR: Ratner, A. V. (Candidate of technical sciences);
Berezina, T. G. (Engineer)

TITLE: Residual stresses in welded joints of austenitic steam pipelines

SOURCE: Teploenergetika, no. 7, 1964, 60-63

TOPIC TAGS: stainless steel steam pipeline, 1Kh18N12T steel steam pipeline, AISI321 steel, steam pipeline weld, weld induced pipeline deformation, steam pipeline cracking

ABSTRACT: The magnitude and distribution of residual deformation along the axis of welded pipeline with 128-mm diameter and 28-mm wall thickness made from austenitic stainless 1Kh18N12T [AISI321] steel have been investigated. Welded joints were cut out from an operating steam pipeline immediately after welding and after 12,000 hrs of operation; the latter joint was cut out because of the appearance of a circumferential crack, 80 mm long. The tests showed that, beyond the weld-affected zone, all fresh-welded joints

Card 1/3

S/091/60/000/011/001/002
A163/A026

Damages on Pipelines of High and Superhigh-Parameter Boilers

Examinations were conducted by the ultrasound flaw-detection method on seams of steam pipes made from 15XM (15KhM) and 12 MX (12MKh) steel. Engineers detected 2 to 15-mm deep cracks in the welded seams. A number of defects resulted also from contact welding. To prevent improper welding of pipes the authors suggest the following: to control the quality of pipes turned out, especially that of austenite ones; modernize the welding equipment to secure high-quality contact welding, and to use the magnetographic crack detection method for discovering flaws in the zone of contact welding; apply a system of marking pipes meter by meter; and to control welded seams in new and old steam pipes by the ultrasound - detection method. There are 4 photographs.

Card 3/3

S/091/60/000/011/001/002
A163/A026

Damages on Pipelines of High and Superhigh-Parameter Boilers

ling may also be found on pipes made of perlite steel. The shield pipe on the ПК-10 (PK-10) boiler at the Yuzhnoural'skaya GRES (Southern Urals State District Power Plant), having been in operation for 33,000 hours, suddenly burst. Widespread defects on thin-wall heating-surface pipes, especially on economizer ones, are caused by the formation of a zone of burning or decarbonization during the process of contact welding at a distance of 15 to 25 mm from the seam. As a rule, this results in the formation of a Widmanstaetten structure in the burnt zone. The exterior of such a honeycomb at a distance of 20 mm from the contact welding, and the microstructure of the honeycomb zone are shown. Carbon pipes with a diameter of 38 x 4.5 mm may be in operation for 10,000 to 25,000 hours at $T = 510^{\circ}\text{C}$ and $p = 110$ atm. Investigations carried out revealed that the diameter of such a pipe increases remarkably. An effective method of discovering cracks in welded seams of pipes made from perlite steel is the ultrasound flaw detection. Color crack detection, however, is most suitable for discovering cracks in austenite steel pipes. In most cases, cracks are caused by defective welds, caused by the use of low-quality electrodes, welding of non-heated metal, impeded shrinkage of the built-up metal, and additional stress during the thermal treatment.

Card 2/3

S/091/60/000/011/001/002
A163/A026

AUTHORS: Berezina, T.G. and Gonchar, M.I., Engineers

TITLE: Damages on Pipelines of High and Superhigh-Parameter Boilers

PERIODICAL: Energetik, 1960, No. 11, pp. 9-11

TEXT: High and superhigh-pressure pipelines are frequently defective due to imperfect production technology. Such defects usually occur during the first 1,000 to 3,000 service hours of the boilers. They may result from poor rolling, overheating, damage of carbon pipes used instead of alloyed ones, and defects during the welding process. Damages on superhigh-parameter pipelines, caused by defective welding, show up during the first 500 to 1,000 service hours. A honeycomb in a pipe of the second-step steam superheater on a continuously-operating coil boiler is shown. The pipe was made of 1X18H12T (1Kh18N12T) steel. The formation speed of such honeycombs may be quite different. An analogous honeycomb came about in the austenite steam-superheating pipe after 3,000 service hours due to internal lamination. Other damages on austenite pipes, especially on steam pipes with diameters of 219 x 30 mm and 194 x 28 mm, resulting from defective production technology and attaining a depth of 1.5 mm, are caused by surface crack-
ing. These crackings may become annular honeycombs. Defects caused by wrong rolling. These crackings may become annular honeycombs. Defects caused by wrong rolling.

Card 1/3

BEREZINA, T.A., assistant; GOLIKOV, V.Ya., assistant

Methods for removing radioactive iodine from sewage of medical institutions. Gig.i san. 25 no.2:12-14 F '60. (MIRA 13:6)

1. Iz kafedry obshchey gigiyeny I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova.

(SEWAGE)

(IODINE radioactive)

BEREZINA, T.A.

Materials for establishing the limits of a permissible concentration of iodine in the air on industrial premises. Trudy 1-go MMI 5:99-109 :59. (MIRA 13:8)

1. Iz kafedry obshchey gigiyeny (zav. -- prof. A.I. Pakhomychyev) 1-go Moskovskogo ordena Lenina meditsinskogo instituta im. I.M. Sechenova.
(IODINE---PHYSIOLOGICAL EFFECT) (AIR---POLLUTION)

FAKHOMYCHEV, A.I., prof.; CHERKASOV, Ye.P., dots.; BEREZINA, T.A., assistant,;
VISHNEVSKAYA, Ye.P., assistant,; DANILEVSKAYA, A.A., assistant,;
SARKISYANTS, E.E., assistant,; KOZLOVA, T.A., assistant,; VOROB'YEVA,
R.S., assistant,; URAZAYEV, N.M., red.; LYUDKOVSKAYA, N.I., tekhn. red.

[Methods of teaching hygiene in medical and pediatric departments
of institutes of medicine] Metodika prepodavaniia gigeny na
lechebnom i pediatricheskom fakul'tetakh meditsinskikh institutov.
Moskva, Gos. izd-vo med. lit-ry, 1958. 142 p. (MIRA 11:12)
(HYGIENE--STUDY AND TEACHING)

BEREZINA T.A.

BEREZINA, T.A., kand.med.nauk

Use of a colorimeter for determining the iodine content of the air.
Fig. 1 san. 22 no.11:88-90 N '57. (MIRA 11:1)

1. Iz kafedry obshchey gigiyeny I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M.Sechenova.

(IODINE, determ.

in air, colorimetric determ. (Rus))

(AIR POLLUTION, determination,

iodine, colorimetric method (Rus))

BERINGINA, T. A.

Dissertation: "Data on the Limited Hygienic Standardization of the Maximum Permissible Concentration of Iodine in the Atmosphere of Working Rooms." Grad Med Sci, First Moscow Order of Lenin Medical Inst, 26 Apr 54. (Vocherazhaya Moskva, Moscow, 15 Apr 54)

SO: SUM 243, 19 Oct 1954

BEREZINA, T. A.

36328. BEREZINA, T. A. I NOVIKOV, V. A. -- Vliyaniye intensivnosti sveta na kauchukonosnost' i urozhay koknagya. Zapiski Leningr. S.-Kh. IN-TA, Vyp. 5, 1948, s. 71-79 -- Bibliogr: 18 nazv.

SO: Letopis' Zhurnal' nykh Statey, No. 49, 1949

Влияние интенсивности света на каучуконосность и урожай кок-кашза

*I. Influence of light intensity on the rubber ^{irradiation} ^{harvest} yield of Kok saghyz
(Taraxacum kok-saghyz - a rubber-bearing plant)*

YUDIN, V.I.; TARTAKOVSKAYA, R.Z.; KRUSHCHANSKAYA, D.Z.; FEDORISHCHEV, T.I.;
RYABININ, N.A.; KALGANOV, M.N.; Prinizmala uchastiye BEREZINA, S.S.

Production of pine tar for the needs of the rubber industry based
on the utilization of waste resins from the Verkhnyaya Siniachikha
Wood Chemical Combine. Kauch.i rez. 21 no.8:49-51 Ag '62.
(MIRA 16:5)

1. Sverdlovskiy zavod rezino-tekhnicheskikh izdeliy i Sverdlovskiy
nauchno-issledovatel'skiy institut pererabotki drevesiny (for all
except Berezina).

(Verkhnyaya Siniachikha--Wood-using industries--By-products)
(Wood tar)

ILLEGIBLE

ACC NR: AP6036116

deposits on brass, after different preliminary treatments. A further curve gives the dependence of the amount of hydrogen adsorbed on the surface of the gold coating and the yield of metal with respect to the current, as a function of the current density. In general, the results of the experiments show that the structure and the properties of gold coatings depend on the state of the base metal. Hydrogen, adsorbed by the base metal, governs the process of electrodeposition of the metal. "The authors express their thanks to G. S. Vozdvizhenskiy for his discussion of the work." Orig. art. has: 6 figures.

SUB CODE: 07, 11/ SUBM DATE: 02Mar66/ ORIG REF: 003/ OTH REF: 001

Card 2/2

ACC NR: AP6036116

SOURCE CODE: UR/0365/66/002/006/0732/0736

AUTHOR: Berezina, S. I.; Gorbachuk, G. A.

ORG: AN UkrSSR, Institute of Organic and Physical Chemistry im. A. Ye. Arbuzov
(AN UkrSSR, Institut organicheskoy i fizicheskoy khimii)

TITLE: Effect of cathode hydrogen on the structure and properties of galvanic gold coatings

SOURCE: Zashchita metallov, v. 2, no. 6, 1966, 732-736

TOPIC TAGS: metal plating, gold, hydrogen

ABSTRACT: The base used was platinum and Type L-59 brass, in the form of plates 10 x 40 mm in size. Absorption of hydrogen was studied by measurements of the polarization capacity and by oscillographic curves of the anode charge. The amount of electrochemically active hydrogen in the deposit was determined from the curves for the anode charge. The structure of the gold coatings was studied by electron microscope and electronographic methods. The microhardness of the deposits was determined on a PMT-3 instrument. The composition of the solutions used for gold plating was as follows (grams/liter): I-- Au(metal)-4, KCN(free)-16, Na₃PO₄-1; II--Au(metal)-4, KCu(free)-16, Na₃PO₄-1, Ni(metal)-5. The electrolytic cell was thermostatted. Based on the experimental results, a figure shows electron microscope photos of the gold

Card 1/2

UDC: 621.357.7

BEREZINA, S.I.; GORBACHUK, G.A.; DEZIDER'YEV, G.P. [deceased]

Hydrogen adsorption on a nickel cathode. Elektrokimiya 1 no.6:
719-723 Je '65. (MIRA 18:7)

1. Khimicheskiy institut AN SSSR.

BERGMAN, A.G.; KOZACHENKO, Ye.L.; BEREZINA, S.J.

System consisting of Li, Na // F, Cl. Zhur. neorg. khim. 9
no.5:1214-1217 My '64. (MIRA 17:9)

DEZIDER'YEV, G.P.; BEREZINA, S.I.; GORBACHUK, G.A. (Kazan')

Adsorption of hydrogen on a platinum cathode. Zhur. fiz. khim.
37 no.4:856-861 Ap '63. (MIRA 17:7)

1. Kazanskiy khimicheskiy institut AN SSSR.

BEREZINA, S.I.; BERGMAN, A.G.; BAKUMSKAYA, Ye.L.

Ternary reciprocal system consisting of fluorides and chlorides of lithium and potassium. Zhur.neorg.khim. 8 no.9:2140-2143 S '63.

Stable cross sections of the quaternary reciprocal system consisting of fluorides and chlorides of lithium, sodium, and potassium.
2144-2147 (MIRA 16:10)

DEZIDER'YEV, G.P.; BEREZINA, S.I.; GORBACHUK, G.A.

Formation of an oxide layer in the course of the electrolytic
polishing of copper. Izv.Kazan.fil. AN SSSR. Ser.khim.nauk
no.6:155-162 '61. (MIRA 16:5)
(Copper--Finishing) (Electrolytic polishing) (Metallic oxides)

DEZIDER'YEV, G.P.; BEREZINA, S.I.

Polarization capacitance of a platinum cathode in a maximum
permissible diffusion current. Izv.Kazan.fil. AN SSSR. Ser.khim.nauk
no.6:150-154 '61. (MIRA 16:5)
(Electrodes, Platinum) (Polarization (Electricity))

67895

The Diffusion Limiting Current on to a Rotating
Disk Electrode in Cathodic Hydrogen Separation

S/020/60/130/06/025/059
B004/B007

the square root of the number of revolutions (Fig 2). At high concentrations the disturbing effect of the intermingling in the electrolyte of the hydrogen bubbles manifests itself. The straight lines intersect the ordinate above the points which correspond to the limiting current in the case of the electrode being at rest (Fig 3). For this case the authors derive an equation for concentration-polarization. The authors refer to V. G. Levich (Ref 3) and B. N. Kabanov (Ref 4). There are 3 figures and 5 Soviet references.

ASSOCIATION: Khimicheskiy institut Kazanskogo filiala Akademii nauk SSSR
(Institute of Chemistry of the Kazan' Branch of the Academy of Sciences, USSR)

PRESENTED: November 4, 1959 by A. N. Frumkin, Academician

SUBMITTED: October 22, 1959

Card 3/3

67895

The Diffusion Limiting Current on to a Rotating Disk Electrode in Cathodic Hydrogen Separation S/020/60/130/06/025/059
B004/B007

with by the authors, viz. gaseous separation of hydrogen, electrolyte circulation was influenced by two factors: 1) Rotation of the platinum disk electrode (1000 - 22000 r.p.m.), and 2) intermixture of the electrolyte by the gas bubbles. The authors intended to find out the manner in which these two factors act. They determined the potential of the electrode by means of a capacity circuit, which was switched on 10^{-5} sec after the polarization current had been switched off. Whereas in a diluted solution (0.0005 - 0.004 N) and in the case of a small number of revolutions of the electrode the limiting current may be determined directly from the polarization curve, disturbances caused by turbulent gas separation and heating of the electrode occur at high numbers of revolution and concentrations (0.05 N). For this case the authors give an equation for the purpose of determining the limiting current on the basis of the ion concentration determining the potential. Figure 1 shows that, with an increase in the number of electrode revolutions, a linear correlation between concentration and density of the limiting current occurs. At low concentrations there is also a linear correlation between current density and

Card 2/3

67895

5(4) 5.4600

AUTHORS: Dezider'yev. G. P., Berezina, S. I. S/020/60/130/06/025/059
B004/B007TITLE: The Diffusion Limiting Current on to a Rotating Disk Electrode
in Cathodic Hydrogen SeparationPERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 130, Nr 6, pp 1270 - 1272
(USSR)

ABSTRACT: In reference 1 the authors showed that the maximum current density in the cathodic separation of hydrogen on platinum or nickel electrodes from a sulphuric acid solution is characterized by the fact that the discharge reaction $H^+ + e \rightarrow H$ is followed by the reaction $H_2O + e \rightarrow OH^- + H$ in the alkalinized layer of the electrolyte adjoining the cathode. This alkalinization occurs by the accumulation of impurity cations, the concentration of which may be calculated according to an equation by A. N. Frumkin (Ref 2) and which, according to the experimental data obtained by the authors, amounts to about $10^{-8} - 10^{-9}$ n. The concentration drop of the ions determining the potential in the boundary film at the electrode may be decreased by circulation of the electrolyte. In the case dealt

Card 1/3

BEREZINA, S. I.

USSR

change of activity of the cathodic space during electrodeposition. A. S. Berman, A. S. Yavor, G. S. Vodyanitskaya, V. G. Gerasimova, and G. P. Oskanov, *Zhur. Khim. Fiz.* 37, 337-341 (1965); *U.S.S.R. Chem. Phys. Engl. transl.* 41, 1458-1461. The potential of a platinum Pt cathode in 0.01*N* H₂SO₄ was, η , 0.145 V (against a Hg/HgCl electrode) after current i of 0.05 amp./sq. cm. and 0.850 V after i of 3.00 amp./sq. cm.; both 0.004 sec. after the interruption of the current, while 0.28 sec. later, η was 0.138 and 0.549 V, respectively. These were measures of the pH in the cathodic space. The pH value from η agreed with that detd. in the bulk of the electrolyte at very small i .d. The range of η is such that this agreement persisted, was made wider by stirring at i or increase in temp. (to 60°), and narrower by adding NaCl or KCl. At higher i .d., the calcd. pH was greater than the actual. At 80° ions also were greater at the cathode than before the electrodepos.

J. Eikerman



J. J. Ekerman

ILLEGIBLE

1. BEREZINA, S.I.: VOZDVIZHENSKIY, G.S.: DEZIDER'YEV, G.P.
2. USSR (600)
4. Electrodes
7. Nickel-hydrogen electrode and some of its uses.
Zhur.prikl.khim. 25 No. 9, 1952.
9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

BEREZINA, S. I.

✓ *Nickel-Hydrogen Electrode. S. I. Berezina, G. S. Vozvishensky, and G. P. Dezidorov (Doklady Akad. Nauk S.S.S.R., 1951, 77, (1), 53-55).—[In Russian]. The behaviour of the Ni-H electrode (Ni plate 10×10 mm.) was studied in 0.1, 0.01, and 0.001N-HCl and NaOH, and in buffer soln. (Na acetate and HCl or NaH_2PO_4 ; H_3BO_3 and borax).

A smooth electrode of sheet Ni, even after long treatment with gaseous H, did not give a stable and reproducible potential. In later experiments, the Ni electrode was coated with "black Ni" by electrodeposition from soln. contg. (g./l.) Ni ammonium sulphate 33, Na-K tartrate 14, at c.d. 0.1 amp./cm.², 20° C., pH 4-6, with electrolytic Ni anodes. By varying the conditions, deposits of different shades could be obtained, but the most stable potentials were given by greyish-black deposits. The black-velvety deposits (resembling Pt black) obtained at higher c.d. were less useful for determining pH, as their H potentials changed with time. For the standard deposits, the Ni-H electrode gave pH values of 1.6, 2.35, and 3.3 when the Pt-H electrode indicated pH of 1.1, 2.0, and 3.1, resp. For higher values (up to pH 12.8) the Ni-H and Pt-H electrodes gave identical values. Other electrodes were prepared by electrodeposition from bath contg. (g./l.): NiSO_4 250, H_3BO_3 30, KCl 5, at c.d. 1 amp./cm.², 25° C., pH 4-8. These Ni-H electrodes indicated pH values of 2.38, 1.05, 3.60, 5.84, 7.10, 10.0, and 11.5, when the values according to the Pt-H electrode were: 1.10, 2.05, 3.00, 6.18, 8.10, 11.5, and 12.7, resp. The use of the Ni-H electrode in determining the pH of the cathode region in electrolysis, and especially in Ni electrodeposition, is discussed.—G. V. E. T.

BEREZINA, S. I.

PA 190T27

USSR/Chemistry - Electrolytic Deposition
of Metals

Aug 51

"Problem of the Variation of Acidity in the Cathodic
Space During the Electrolytic Deposition of Metals,"
S. I. Berezina, G. S. Vozdvizhenskiy

"Zhur Prik Khim" Vol XXIV, No 8, pp 832-839

Describes method for detn of pH in space surrounding
Pt and Ni cathode in case of electrolysis of H_2SO_4
soln and electrolytic deposition of Ni from $NiSO_4$
soln. These cathodes, since they adsorb H, serve
also as H electrodes, thus permitting to det P_H ,
which is high at their surfaces. Method is applica-
ble to some processes of great practical value.

190T27 ✓

BEREZINA, S.I.

BEREZINA, S.I.; VOZDVIZHENSKIY, G.S.

Changes in acidity in the cathode space in electrodeposition of
metals. Izv.Kazan.fil.AN SSSR Ser.khim.nauk no.1:89-98 '50.

(MLRA 10:5)

(Electroplating) (Cathodes)

GUDIN, N.V.; AKHMETOV, N.S.; BEREZINA, S.I.; TROITSKAYA, A.D.

Gennadii Serafimovich Vozdvizhenski, 1905- ; on his 60th
birthday. Zashch.met. 1 no.6:729-730 N-D '65.

(MIRA 18:11)

LOSIKOV, B.V.; FAT'YANOV, A.D.; ALEKSANDROVA, L.A.; GOLOVISTIKOV, I.V.;
BEREZINA, R.M.

Lubricants for gas-turbine systems. Khim. i tekhn. topl. i
masel 9 no.3:58-62 Mr'64 (MIRA 17:7)

LOSIKOV, B.V.; FAT'YANOV, A.D.; ALEKSANDROVA, L.A.; BEREZINA, R.M.

Separate quantitative determination of SO_2 and SO_3 in the
exhaust gases of engines. Khim. i tekhn. topl. i masel 9 no.6:
44-47 Je'64 (MIRA 223)

ACCESSION NR: AP4017575

tricresyl phosphates (sediment reduced from 0.9 to 0.1%). It was further found that the addition of 1% sovol (pentachlorodiphenyl), a chemically stable and fully inert compound, raises the anti-wear (antifriction) properties of the oil to the level of the MK-22 oil (critical load 45 and 50 kg, respectively). The addition of more than 2% sovol does not improve the anti-wear property. Both additives are compatible. Laboratory tests were verified by an actual turbine run. Oil for gas turbines with ionol and sovol additives is at present manufactured according to the GOST 10289-62 standard. Orig. art. has: 4 figures and 4 tables.

ASSOCIATION: none

SUBMITTED: OO

DATE ACQ: 23Mar64

ENCL: OO

SUB CODE: CH, FL

NO REF SOV: 000

OTHER: 000

Card 2/2

ACCESSION NR: AP4017575

S/0065/64/000/003/0058/0062

AUTHOR: Losikov, B. V.; Fat'yanov, A. D.; Aleksandrova, L. A.;
Golovistikov, I. V.; Berezina, R. M.

TITLE: Oils for gas turbine installations

SOURCE: Khimiya i tekhnol. topliv i masel, no. 3, 1964, 58-62

TOPIC TAGS: oil, oil antioxidant, antifriction additive, gas turbine
oil, ionol, butyl phenol, pentachloro diphenyl, sovol

ABSTRACT: The purpose of the work was to find an all-purpose oil for the lubrication of both bearings and the reducer of a gas turbine. It should have low viscosity and good antioxidant and antifriction properties (no sediments formed). The choice was a transformer oil which was tested with a number of additives to provide the above properties. After extensive experiments, the authors found that the addition of ionol (4-methyl-2,6-di-tert-butylphenol) in a proportion of 0.2-0.7% increases oil stability at 170-200C and gives incomparably better results as an antioxidant than tributyl-, triphenyl- and

Card 1/2

26522
 S/065/61/000/008/007/009
 E194/E135

The use of residual fuels in gas ...

Use of ammonia at the rate of 0.2% weight is less effective. The best results were obtained when the ammonia was injected before the combustion zone. A further advantage of using soluble compounds as against the suspensions sometimes used is that erosive wear of the turbine blades is reduced. A mechanism of action of the additives is suggested.

There are 6 figures, 1 table and 14 references: 5 English and 11 Soviet (including 3 translations from Proceedings of World Petroleum Congress VII). The four most recent English language references read as follows:

- Ref.1: A. Garner, P. Green, R. Harper, F. Pegg. J. Inst. of Petrol., Vol.39, 278, 1953.
- Ref.2: Proc. Inst. Mech. Eng., Vol.168, No.3, 1954.
- Ref.4: P. Lloyd, R. Probert. Proc. Inst. Mech. Eng., Vol.163, 206, 1950.
- Ref.9: H. King, H. Nutt. Trans. ASME, Vol.78, No.1, 185-196, 1956.

Card 4/4

26522

S/065/61/000/008/007/009
E194/E135

The use of residual fuels in gas

increases appreciably only with fuel of 30 ppm vanadium or more. In general, at temperatures of 650-850 °C the combustion products of fuels containing 14 - 35 parts per million vanadium increased the rate of corrosion by a factor of 4 to 15, depending on the alloy used. The effect of additives was checked on fuel grade F-12 (no vanadium) and F-5 containing 27 parts per million vanadium and 9 parts per million sodium using alloys EI-602, EI-681 and EI-417. The additives used were organic compounds of magnesium that are readily soluble in heavy fuels but differing in the structure of the organic radical. The use of additive to the extent of 0.2% weight of fuel greatly reduced vanadium corrosion. It was shown that some organic magnesium compounds are much more effective than others. It is concluded that with 30 parts per million vanadium in the fuel the use of 0.016% magnesium in the form of soluble organic compounds practically completely prevents vanadium corrosion. Tests were also made with injection into the combustion chamber of ammonia to the extent of 0.5% by weight of the fuel. This also practically prevents vanadium corrosion of the nickel and iron alloys within the temperature range tested.

Card 3/4

20522
S/065/61/000/000/007/009
E194/E135

The use of residual fuels in gas

placed in the path of flow of the combustion products. Corrosion was assessed by change in weight after the specimen had been exposed in the chamber and cleaned by electrolytic treatment in a solution of sodium carbonate and sodium hydroxide. It was found that corrosion is most intense in the first 2 - 3 hours and that it has reached a practically constant value at the end of 5 hours so that there was no need to continue the tests longer than this. The reference fuel was grade Q-12 (F-12) containing 130 parts per million sodium and no vanadium. The vanadium content of the other fuels ranged from 16 to 35 parts per million vanadium. The first tests were made with nickel base alloys M4-455 (EI-435) and M4-602 (EI-602) which show little vanadium corrosion at temperatures below 650-700 °C; however, at higher temperatures the rate of corrosion rises rapidly. Alloys based on iron such as grade M4-481 (EI-481) are much more affected by vanadium than are the nickel alloys, particularly at the higher temperatures. The higher the vanadium content of the fuel, the lower the temperature at which the rising inflection of the corrosion curve occurs. At a gas temperature of 800-850 °C appreciable corrosion is observed with 10 ppm vanadium in the fuel, whereas at 630-680 °C corrosion

Card 2/4

BEREZINA, R.M.

25522

S/065/61/000/008/007/009
E194/E135

11.0/70

AUTHORS: Lonikov, B.V., Fat'yanov, A.D., Mikulin, Yu.V.,
Aleksandrova, L.A., Koznev, G.G., and Berezina, R.M.

TITLE: The use of residual fuels in gas turbines

PERIODICAL: Khimiya i tekhnologiya topliv i masel,
1961, No. 8, pp. 47-53

TEXT: The mechanism of deposit formation and corrosion in gas turbines using residual fuels containing vanadium and sodium is discussed. Possible methods of avoiding the vanadium corrosion include injection into the combustion chamber of substances which react with vanadium pentoxide and the more convenient use of fuel additives. The object of the present work was to check, on typical materials used in gas turbines, the corrosivity of corrosion products of high-sulphur marine heavy-fuel grade (FC-5 (Fs-5) and to study the use of additives to reduce this corrosion. The tests were made on a model combustion chamber which had previously been used for testing high sulphur distillate fuels but for the present work fuel heating equipment was provided. The test samples were made up as plates of 40 x 25 x 4 mm which were

Card 1/4

KATSNEL'SON, R.A., kandidat meditsinskikh nauk; BEREZINA, P.F., kandidat
meditsinskikh nauk

Treatment of staphylococcal pyodermitis with anatoxin. Vest.ven.
i derm.no.3:53 My-Je '56. (MLRA 9:9)

1. Iz kafedry mikrobiologii i kliniki kozhnykh i venericheskikh
zabolevaniy Tashkentskogo gosudarstvennogo meditsinskogo instituta
imeni V.M.Molotova.

(SKIN--DISEASES) (TOXINS AND ANTITOXINS)

BEREZINA, P.F.; KATSNEL'SON, R.A.

Treatment of pyoderma with antibiotics. Vest. vener., Moskva No.1:28-29
Jan-Feb 52. (CML 21:4)

1. Of the Clinic for Skin and Venereal Diseases (Head---Prof. A.A. Akov-
byan) of Tashkent Medical Institute and of the Department of Microbiology
(Head--Honored Worker in Science Prof. P.F. Samsonov) Tashkent Medical
Institute.

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204800008-6

TRET'YAKOVA, N.Ya.; BEREZINA, O.Ya. (Moskva)

Reviews. Shvein. prom. no.4:37 J1-Ag '65.

(MIRA 18:9)

BEREZINA, O.Ya., kand. tekhn. nauk, starshiy nauchnyy sotrudnik

Statistical method of production control in cotton spinning.
Tekst. prom. 25 no.4:25-27 Ap '65. (MIRA 18:5)

1. Tsentral'nyy nauchno issledovatel'skiy institut khlopkatobu-
mazhnoy promyshlennosti.

PEREZINA, O.Ya., starshiy nauchnyy sotrudnik; SHAKHOVA, Ye.H., inzh.;
GUSECHINA, N.G., inzh.

Studying the causes of the formation of periodic unevenness
of the product on spinning machines. Tekst. prom. 24 no.10:
40-43 O '64. (MTR 1212)

1. Tsentral'nyy nauchno-issledovatel'skiy institut khimicheskoy
mashinnoy promyshlennosti (for Perezina). 2. Zavodnyy nauchnyy
proizvodstvennoy laboratoriyey pryadil'no-tkatskoy fabriki
imeni Frunze (for Shakhova). 3. Nachal'nik prigotovitel'noy
pryadil'nogo tsakha pryadil'no-tkatskoy fabriki imeni Frunze
(for Gusechina).

BEREZINA, O.Ya.

Testing hosiery yarn. Standartizatsiia 26 no.7:32-33 JI '62.
(MIRA 15:7)

(Yarn--Testing)

MARKOV, F.M., inzh.-~~MARKOV~~ REZINA, O.Ya. starshiy nauchnyy sotrudnik, kand.
tekhn.nauk

Statistical method of quality control in cotton spinning. Tekst.
prom. 22 no.4:35-38 Ap '62. (MIRA 15:6)

1. Zaveduyushchiy laboratoriyey Reutovskoy khlopkopryadil'noy
fabriki (for Markov). 2. Tsentral'nyy nauchno-issledovatel'skiy
institut khlopkotobumazhnoy promyshlennosti (TSNIKhBI).
(Cotton manufacture--Quality control)

BEREZINA, O.Ya.

Statistical control method in cotton spinning. Nauch.-issl.
trudy TSNIKHBI '60 [publ. '62]:232-242.

(MIRA 18:2)

IVANOV, S.S., kand.tekhn.nauk; BEBEZINA, O.Ya., kand.tekhn.nauk

Development of unevenness norms for semiprocessed fibers and yarn.
Tekst.prom. 21 no.2:57-59 Ja '61. (MIRA 14:3)
(Textile fiber Standards)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R000204800008-6

BEREZINA, O. Ya.: Master Tech Sci (diss) -- "The dependence of the properties of finely combed wool yarn on its number and twist". Moscow, 1959. 21 pp (Min Higher Educ USSR, Moscow Textile Inst), 150 copies (KL, No 16, 1959, 108)

BEREZINA, O.Ya.

Rated properties of fine combed-wool yarn. Izv.vys.ucheb.sov.; tekhn.
tekst.prom. no.4:19-27 '58. (MIRA 11:11)

1. Moskovskiy tekstil'nyy institut.
(Woolen and worsted manufacture)

BEREZINA, O.Ya., inzhener.

New type of Russian crossbred wool. Tekst. prom. 17 no.7:20-22
Jl '57. (MLRA 10:9)

(Wool)

BEREZINA, O.Ya., inzhener.

New type of hybrid wool in the Transcarpathian Mountain region.
Tekst.prom. 16 no.5:17-18 My '56. (MLRA 9:8)
(Transcarpathia--Wool industry)

BEREZINA, O.Ya., inzhener.

New types of uniform wool from crossbred sheep. Tekst.prom.14
no.1:15-17 Ja '54. (MLRA 7:2)
(Wool)

BOCHAROV, A.F.; GOFMAN, Yu.P.; BEREZINA, O.N.; POKHITONOV, Yu.P.

Morphological characteristics of the particles of herpes simplex virus. Vop. virus. 10 no.2:150-155 Mr-Apr '65.

(MIRA 18:10)

1. Institut virusologii imeni D.I.Ivanovskogo ANN SSSR, Moskva.

UGOLEVA, N.A.; BEREZINA, O.N.; NOSACHEVA, A.D.; SOKOLOV, M.I.; PETERSON, O.P.

Ribonucleic acid polymerase activity induced by NDV virus (M₂ strain).
Vop. virus. 10 no.3:347-349 My-Je '65. (MIRA 18:7)

1. Institut virusologii imeni Ivanovskogo AMN SSSR, Moskva.

POPOVA, O.M.; BEREZINA, O.N.

Effect of previous X-ray irradiation on the susceptibility of mice to infection by ornithosis virus aerosol. Vop. virus. 9 nos. 216 216 Mz-Ap '64. (MIRA 1964)

1. Institut virusologii imeni Ivanovskogo AMN SSSR, Moskva.

PETERSON, O.P.; BEREZINA, O.N.; KOZLOVA, I.A.; SKLYANSKAYA, Ye.I.; PETROV, R.V., red.; ZAKHAROVA, A.I., tekhn. red.

[Influence of ionizing radiation on virus infections and on anti-viral immunity] Vlianie ioniziruiushchego izlucheniia na virusnye infektsii i protivovirusnyi immunitet. Moskva, Gos. izd-vo med. lit-ry Medgiz, 1961. 165 p. (MIRA 14:9)
(RADIATION—PHYSIOLOGICAL EFFECT) (VIRUS DISEASES) (IMMUNITY)

BEREZINA, O. N., Candidate Med Sci(diss) -- "The effect of protracted irradiation with small doses of X-rays on susceptibility to the grippe virus and the formation of anti-grippe immunity under experimental conditions". Moscow, 1959. 11 pp (Acad Med Sci USSR), 200 copies (KL, No 24, 1959, 148)

BEREZINA, O.; ZLOTNIKOVA, L.; LEONOVA, A.; NOVITSKAYA, O.

Methodology of labor productivity analysis and planning by
factors in the petroleum refining industry. Biul. nauch.
inform: trud i zar. plata 3 no. 11:3-10 '60. (MIRA 14:1)*
(Petroleum industry--Labor productivity)

BEREZINA
~~REDACTED~~ N. V.

PA 75T24

USSR/Chemistry - Electrolysis
 Chemistry - Cathodes

Apr 1948

"Cathodes With Reduced Hydrogen Liberation Potential,"
 M. P. Fedot'yev, N. V. Berezina, Ye. G. Kruglova,
 Electrochem Lab, Leningrad Tech Inst, 12 pp

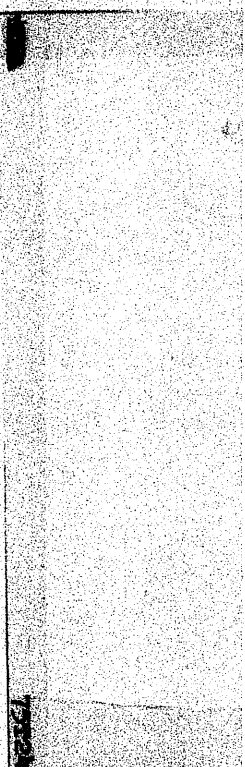
"Zhur Priklad Khimii" Vol XII, No 4

Describes method which permits easy reduction of
 cathode potential. Studies of 15 common hydrocarbons
 and steel alloys did not give positive results in
 spite of wide variety of samples used. Attempts to
 determine proper method for preparing surfaces.
 Practical value of this series of experiments found

75T24

USSR/Chemistry - Electrolysis (Contd) Apr 1948

In possibility of determining length of operational
 use of a cathode under various operating conditions.
 Submitted 1 Oct 1947.



75T24

BEREZINA, N.P.; GLUPUSHKIN, P.M.; KASHIN, V.A.; SIDOROV, A.I.

Conductive rubbers in cable goods. Kauch.i rez. 21 no.9:21-26
S '62. (MIRA 15:11)

1. Tomskiy nauchno-issledovatel'skiy institut kabel'noy
promyshlennosti i Moskovskiy nauchno-issledovatel'skiy
institut kabel'noy promyshlennosti.

(Rubber--Electric properties)
(Cables)

NEKRASOV, L.N.; BEREZINA, N.P.

Use of a disk electrode with a ring in studying the electroreduction of copper. Dokl. AN SSSR 142 no.4:855-858 F '62.

(MIRA 15:2)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
Predstavleno akademikom A.N.Frumkinym.

(Copper)

(Reduction, Electrolytic)

KUZIN, Aleksandr Mikhaylovich; BEREZINA, N.M.

[Atomic energy in agriculture] Atomnaia energiya v sel'skom khoziaistve. Moskva, Atomizdat, 1964. 79 p.
(MIRA 19:1)

BEREZINA, Nina Mikhaylovna; KUZIN, A.M., red.; KUBLOVA, S.V.,
red.

[Radiation of farm crop seeds before sowing] Predposavnoe
oblucheniye semien sel'skokhoziaistvennykh rasteniy. Mos-
skva, Atentzdat, 1964. 210 p. (1964 19.1)

1. Chlen-korrespondent AN SSSR (Per Kuzin).

BEREZINA G.D.5 KUDNITS, Y.G.

Worked at working desk of G.D.5 KUDNITS in the period of
regime change in Moscow. Radioed G.D.5 KUDNITS in 1941.
(MORR 1941)
1. In the first half of the year 1941 G.D.5 KUDNITS.

KUZIN, A.M.; DUBONOSOV, T.S.; BERREYINA, N.M.; FIYA-ZADE, R.R.; TARKOV, S.N.

Possibilities for utilization of ionizing radiations in hydroponics. Radiobiologiya 4 no.3:457-459 '64.

(MIRA 17:11)

1. Institut biologicheskoy fiziki AN SSSR, Moskva i Krasnodarskiy nauchno-issledovatel'skiy selskokhozyaystvennyy institut, gidroponicheskoye khozyaystvo.

BEREZINA, N.M.; YAZYKOVA, V.A. [deceased]

Effect of ionizing radiations on peroxidase activity in corn
seedlings grown from irradiated seeds. Radiobiologiya 3 no.2:
177-180 '63 (MIRA 17:1)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.

BEREZINA, N.M.; SHCHIBR, A. G.I.; DROZHZHINA, V.V.; RIZA-ZADE, R.R.;
TARASOVA, A.D.

Effect of Co^{60} gamma irradiation of tubers before planting on
the yield and vitamin C content of potatoes. Radiobiologiya
3 no.1:139-142 '63. (MIRA 16:2)

1. Institut biologicheskoy fiziki AN SSSR, Moskva.
(PLANTS, EFFECT OF GAMMA RAYS ON) (POTATOES)
(ASCORBIC ACID)

BEREZINA, N.M.

Methods of production and economic significance of polyploid
forms of *Pelargonium radula roseum* W. Trudy MOIP. Otd. biol.
5:274-279 '62. (MIRA 16:5)

1. Institut biofiziki AN SSSR, Moskva.
(TERANI4S) (POLYPLOIDY)

Morphological changes ...

S/205/62/002/006/020/021
E027/E410

irradiated potatoes, mint rhizomes and apple cuttings.
There are 6 figures and 3 tables.

ASSOCIATION: Institut biologicheskoy fiziki AN SSSR, Moskva
(Institute of Biophysics AS USSR, Moscow)

SUBMITTED: July 18, 1962

Card 2/2

43488

S/205/62/002/006/020/021
E027/E410

271220

2620

AUTHORS: Berezina, N.M., Ostapenko, V.I., Korneva, Ye.I.,
Riza-Zade, R.R.

TITLE: Morphological changes in plants under the influence
of ionizing radiation

PERIODICAL: Radiobiologiya, v.2, no.6, 1962, 931-937

TEXT: The production of multiple cobs was observed in maize plants grown from seeds irradiated with 500 r from a Cs¹³⁷ source before sowing. Of 200 plants studied 25 (13%) had 1 cob; 91 (45%) had 2; 60 (30%) had 3; 18 (9%) had 4; whereas 90 (45%) of 200 control plants from unirradiated seeds had 1 cob and the remaining figures were all lower. The harvest from 6 plots sown with irradiated and control seeds showed that the experimental plants gave higher yields of stalks, cobs and husks. Increased branching occurred in buckwheat exposed to chronic gamma-irradiation in a total dose of 250 r and there was a corresponding increase in the number of inflorescences. Branching could also be induced in hemp and jute, with corresponding increase in the harvest. Similar changes were seen in plants developing from
Card 1/2

BEREZINA, N. M.

SESSION D-5-4 : Plants : Effects on Seeds

(a)

The Influence of γ -Irradiation of the Seeds on the Development and Metabolism of the Plant

A. M. Kuzin and N. M. Berezina

Physical and chemical heterogeneity of different tissues of seeds causes different initial processes in them after γ -irradiation (lifetime of free radicals, formation of peroxides, etc.)

Investigation of the oxidation processes in a germinating seed after irradiation showed considerable changes in the activity of peroxidase, of polyphenoloxidase and of catalase in different parts of the seed. Changes of oxidation processes are reflected in the rate of accumulation of some of the active regulators of oxidation processes, namely ascorbic acid and lipid peroxides. Change of the oxidation processes in an irradiated seed and change of the DNA

structure cause further changes in the rates of the development and of the metabolism of the plant.

The dose-dependence is a two-phase character for many species of plants. Irradiation causes acceleration of the development of the plant below a definite dose, and changes of the regular distribution of growing points which lead to branching, and also increases the numbers of regenerating organs. Increased doses cause increasing damage to development and finally its full inhibition. Changes in morphogenesis lead to changes of metabolic processes. This results in an increased accumulation in tissues of one or another metabolite.

Institute of Biophysics, USSR Academy of Sciences, Moscow

report presented at the 2nd Intl. Congress of Radiation Research,
Harrogate/Yorkshire, Gt. Brit. 5-11 Aug 1962

Chronicle. Presowing...

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D298/D303

that irradiation of tubers in a dose of 250 r gave an ascorbic acid content of 33.7 mg%, as opposed to 24.8% in the control. Presowing irradiation of perennial grass seeds carried out by the Urals Branch, AS USSR, and the Vsesoyuznyy nauchno-issledovatel'skiy institut udobreniy i agropochvovedeniya VASKhNIL (All-Union Scientific Research Institute of Fertilizers and Agropedology, VASKhNIL) gave an increase in the green mass yield at the first and subsequent mowings. The Institute of Biophysics, AS USSR, in conjunction with the Vsesoyuznyy nauchno-issledovatel'skiy institut l'na (All-Union Scientific Research Institute of Flax) and the Institut yadernoy fiziki (Institute of Nuclear Physics) studied the presowing irradiation of textile crop seeds (flax and Indian hemp) and found that this method led to an increase in the yield and the quality of the fiber. There is 1 table.

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Chronicle. Presowing...

14 - 22%. Irradiation of sprouting seeds gave an increase of up to 50%. The Institute of Biophysics, AS USSR, the Institute of Genetics, AS Azerbaydzhanskaya SSR, and L'vov University found that irradiation of cucumber seeds in doses of 300 - 500 r gave an increase of 15 - 30% in the cucumber yield (with irradiation of dry seeds) or up to 39% (irradiation of sprouting seeds). The results of presowing irradiation of melon and watermelon seeds carried out by the Institute of Genetics, AS Azerbaydzhanskaya SSR, are also reported. Irradiation of sprouting seeds of sugar beet at L'vov University gave a rise of 28 - 56% in the fruit yield. This was accompanied, however, by a drop in the sugar content of the roots. The Nauchno-issledovatel'skiy institut kartofel'nogo khozyaystva (Scientific Research Institute of Potato Farming), the Institute of Biophysics, AS USSR, and the Institute of Biology, AS Latviyskaya SSR, studied the presowing irradiation of different varieties of potato. Irradiation in doses of 100 - 500 r gave a rise of 8 - 44% in the tuber yield. Grechishnikov found that presowing irradiation of potato tubers in a dose of 500 r gave a vitamin C content of 19.1 mg%, as opposed to 13.4% in the control. The authors of the article found

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